



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Shaharyar Khan

Serial No.: 10/561,829

Art Unit: Not Yet Assigned

I.A.

Filing Date: June 25, 2004

Examiner: Not Yet Assigned

For: *MODIFIED VECTORS FOR ORGANELLE TRANSFECTION*

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §1.56 and 37 C.F.R. §1.97, Applicant submits a Supplemental Information Disclosure Statement, including three (3) pages of Form PTO-1449 and copies of seventeen (17) documents cited therein. Pursuant to the waiver in the notice entitled "Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications Filed After June 30, 2003" published on August 5, 2003 in 1273 OG 55, copies of U.S Patents and Published Applications are not enclosed. Copies will be provided upon request, however.

This Supplemental Information Disclosure Statement is being filed under 37 C.F.R. § 1.97(b) prior to a first Office Action on the merits. It is believed that no fee is required with this submission. However, should a fee be required, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 50-1329.

U.S.S.N.: 10/561,829  
I.A. Date: June 25, 2004  
SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT

### U.S. Patents

<u>Number</u>	<u>Issue Date</u>	<u>Patentee</u>	<u>Class/Subclass</u>
5,831,020	11-03-1998	Citovsky	530/350
6,506,559	01-14-2003	Fire, et al	435/6
6,531,647	03-11-2003	Baulcombe, et al	800/278
6,759,574	07-06-2004	Ream, Jr., et al	800/301

### U.S. Patent Applications

<u>Number</u>	<u>Publication Date</u>	<u>Applicant</u>	<u>Class/Subclass</u>
2002/0086356	07-04-2002	Tuschl, et al	435/69.1
2005/0147993	07-07-2005	Khan	530/350
2006/0211647	09-21-2006	Khan	435/320.100

### Foreign Documents

<u>Number</u>	<u>Publication Date</u>	<u>Patentee</u>	<u>Country</u>
WO 98/46271	10-22-1998	Strategene, Inc.	PCT
WO 00/19993	04-13-2000	Brownlee	PCT
WO 01/75164	10-11-2001	Whitehead Biomedical Institute; Max Planck Gesellschaft; Massachusetts Inst. Technology; Univ. Massachusetts Medical Ct.	PCT
WO 03/052067	06-26-2003	University of Virginia Patent Found.	PCT

### Publications

ALAM, et al., "Human mitochondrial DNA is packaged with TFAM", *Nucleic Acids Res.*, 31(6):1640-5 (2003).

CLINE and HENRY. "Import and routing of nucleus-encoded chloroplast proteins", *Annu. Rev. Cell Dev. Biol.*, 12:1-26 (1996).

DEL GAIZO and PAYNE, "A novel TAT-mitochondrial signal sequence fusion protein is processed, stays in mitochondria, and crosses the placenta", *Mol. Ther.*, 7(6):720-30 (2003).

DEL GAIZO, et al., "Targeting proteins to mitochondria using TAT", *Mol. Genet. Metab.*, 80(1-2):170-80 (2003).

DEROSSI, et al., "The third helix of the Antennapedia homeodomain translocates through biological membranes", *J. Biol. Chem.*, 269(14):10444-50 (1994).

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EMANUELSSON, et al., "Predicting subcellular localization of proteins based on their N-terminal amino acid sequence", *J. Mol. Biol.*, 300(4):1005-16 (2000).

FRANKEL and PABO, "Cellular uptake of the tat protein from human immunodeficiency virus", *Cell*, 55(6):1189-93 (1988).

HO, et al., "Synthetic protein transduction domains: enhanced transduction potential *in vitro* and *in vivo*", *Cancer Res.*, 61(2):474-7 (2001).

KABOURIDIS, "Biological applications of protein transduction technology", *Trends Biotechnol.*, 21(11):498-503 (2003).

MURPHY, "Selective targeting of bioactive compounds to mitochondria", *Trends Biotechnol.*, 15(8):326-30 (1997).

SANDMAN, et al., "Diversity of prokaryotic chromosomal proteins and the origin of the nucleosome", *Cell. Mol. Life Sci.*, 54(12):1350-64 (1998).

WEISSIG, "Mitochondrial pharmaceutics", *Mitochondrion*, 3(4):229-44 (2004).

WENDER, et al., "The design, synthesis, and evaluation of molecules that enable or enhance cellular uptake: peptoid molecular transporters", *Proc. Natl. Acad. Sci. U.S.A.*, 97(24):13003-8 (2000).

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**Remarks**

This statement should not be interpreted as a representation that an exhaustive search has been conducted or that no better art exists. Moreover, Applicant invites the Examiner to make an independent evaluation of the cited art to determine its relevance to the subject matter of the present application. Applicant is of the opinion that his claims patentably distinguish over the art referred to herein, either alone or in combination.

Respectfully submitted,

  
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Charles Vondran  
Reg. No. 45,315

Dated: October 23, 2006

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**Substitute for form 1449A/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 3

Sheet 1 of 3 Attorney Docket Number GNC 0001

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office. <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	PCT	WO 98/46271			Strategene, Inc.	10-22-1998		
	PCT	WO 00/19993			Brownlee	04-13-2000		
	PCT	WO 01/75164			Whitehead Biomedical Institute; Max Planck Gesellschaft; Massachusetts Institute of Technology; University of Massachusetts Medical Ct.	10-11-2001		
	PCT	WO 03/052067			University of Virginia Patent Found.	06-26-2003		

Examiner's Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

<sup>1</sup> Unique citation designation number <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant to place a check mark here if

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Substitute for form 1449A/PTO			Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(use as many sheets as necessary)</small>			Application Number	10/561,829
			I.A. Filing Date	June 25, 2004
			First Named Inventor	Shaharyar Khan
			Group Art Unit	Not Yet Assigned
			Examiner Name	Not Yet Assigned
Sheet 1 of 1	of	3	Attorney Docket Number	GNC 0001

OTHER ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		
		ALAM, et al., "Human mitochondrial DNA is packaged with TFAM", <i>Nucleic Acids Res.</i> , 31(6):1640-5 (2003).		T <sup>2</sup>
		CLINE and HENRY "Import and routing of nucleus-encoded chloroplast proteins", <i>Annu. Rev. Cell Dev. Biol.</i> , 12:1-26 (1996).		
		DEL GAIZO and PAYNE, "A novel TAT-mitochondrial signal sequence fusion protein is processed, stays in mitochondria, and crosses the placenta", <i>Mol. Ther.</i> , 7(6):720-30 (2003).		
		DEL GAIZO, et al., "Targeting proteins to mitochondria using TAT", <i>Mol. Genet. Metab.</i> , 80(1-2):170-80 (2003).		
		DEROSSI, et al., "The third helix of the Antennapedia homeodomain translocates through biological membranes", <i>J. Biol. Chem.</i> , 269(14):10444-50 (1994).		
		EMANUELSSON, et al., "Predicting subcellular localization of proteins based on their N-terminal amino acid sequence", <i>J. Mol. Biol.</i> , 300(4):1005-16 (2000).		
		FRANKEL and PABO, "Cellular uptake of the tat protein from human immunodeficiency virus", <i>Cell</i> , 55(6):1189-93 (1988).		
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<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant to place a check mark here if English language Translation is attached.

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		I.A. Filing Date	June 25, 2004	
		First Named Inventor	Shaharyar Khan	
		Group Art Unit	Not Yet Assigned	
		Examiner Name	Not Yet Assigned	
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